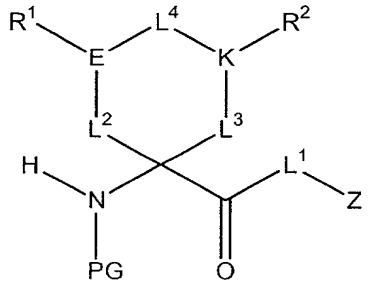
CLAIMS

I claim:

1. The compound of the following formula

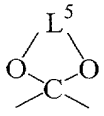


wherein

Z comprises the residue of a solid polymer support;

L^1 comprises a divalent group of the formula –O-, -NH-, -O-CH_2-C_6H_4-CH_2O-;

L^2 and L^3 comprise, independently, alkylene, alkenylene, alkynylene, or a direct single bond;

L_4 comprises alkylene, -O-, -S-, -C(O)-, -S(O)-, -$S(O)_2$-,  , or a direct single or double bond;

L^5 comprises –CH_2CH_2- or –$CH_2CH_2CH_2$-;

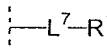
E and K comprise, independently, -N-, -CH-, or -C=;

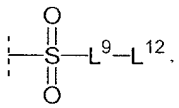
PG comprises hydrogen or an amino protecting group;

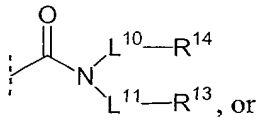
R^1 and R^2 comprise, independently, alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclyl, aryl, heteroaryl, hydrogen, halo, -O-G^3, -O-G^4, -G^3, -G^4, or -N(G^3)G^4;

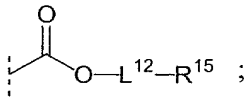
R^1 and R^2 may be taken together to constitute a cycloalkyl or heterocyclyl ring, or, where L^4 is a direct bond, R^1 and R^2 may be taken together to constitute a fused aryl or heteroaryl ring;

G^3 and G^4 comprise, independently,






, or


;

where

L^7, L^8, L^9, L^{10}, L^{11}, L^{12} comprise, independently, alkylene, alkenylene, alkynylene, cycloalkylene, cycloalkenylene, arylene, heterocyclylene, heteroarylene, fused cycloalkylarylene, fused cycloakylheteroarylene, fused heterocyclylarylene, fused heterocyclylheteroarylene , or a direct bond; and

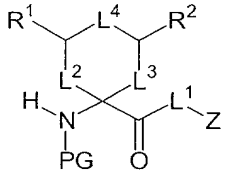
R^{10}, R^{11}, R^{12}, R^{13}, R^{14}, R^{15} comprise, independently, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, heterocyclyl, heteroaryl, aryl, fused cycloalkylaryl, fused cycloakylheteroaryl, fused heterocyclylaryl, fused heterocyclylheteroaryl, $-NR^{18}R^{19}$, $-OR^{18}$, $-SR^{18}$, or hydrogen, where R^{18} and R^{19} are as defined below;

R^{18} and R^{19} comprise, independently, hydrogen, alkyl, alkynyl, alkenyl, cycloalkyl, cycloalkenyl, aryl, heterocyclyl, or heteroaryl.

2. The compound of claim 1, wherein the groups L^2, L^3, L^4, E, and K comprise a ring with 3 to 8 members.

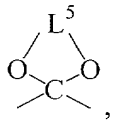
3. The compound of claim 2, wherein PG is selected from the group consisting of t-butoxycarbonyl, 9-fluorenylmethoxycarbonyl, and benzyloxycarbonyl.

4. The compound of claim 2, wherein E and K are –CH-, represented by the formula



and wherein,

L^2 and L^3 comprise, independently, $-CH_2-$, $-CH_2CH_2-$, or a direct single bond;

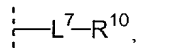
L^4 comprises $-CH_2-$, -C(O)-,  , or a direct single bond;

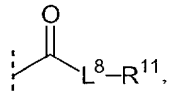
L^5 comprises $-CH_2CH_2-$ or $-CH_2CH_2CH_2-$;

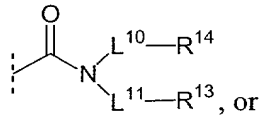
R^1 and R^2 comprises, independently, alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclyl, aryl, heteroaryl, hydrogen, halo, $-O-G^3$, $-O-G^4$, $-G^3$, $-G^4$, or $-N(G^3)G^4$;

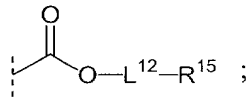
R^1 and R^2 may be taken together to constitute a cycloalkyl or heterocyclyl ring;

G^3 and G^4 comprise, independently,









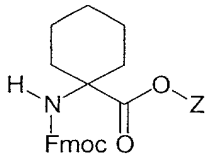
where

L^7, L^8, L^{10}, L^{11}, L^{12} comprise, independently, alkylene, alkenylene, alkynylene, cycloalkylene, cycloalkenylene, arylene, heterocyclylene, heteroarylene, fused cycloalkylarylene, fused cycloakylheteroarylene, fused heterocyclylarylene, fused heterocyclylheteroarylene, or a direct bond; and

R^{10}, R^{11}, R^{13}, R^{14}, R^{15} comprise, independently, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, heterocyclyl, heteroaryl, aryl, fused cycloalkylaryl, fused cycloakylheteroaryl, fused heterocyclylaryl, fused heterocyclylheteroaryl, $-NR^{18}R^{19}$, $-OR^{18}$, $-SR^{18}$, or hydrogen, where R^{18} and R^{19} are as defined below;

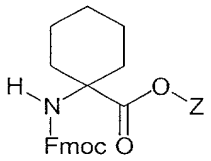
R^{18} and R^{19} comprise, independently, hydrogen, alkyl, alkynyl, alkenyl, cycloalkyl, cycloalkenyl, aryl, heterocyclyl, or heteroaryl.

5. The compound of claim 4 of the formula



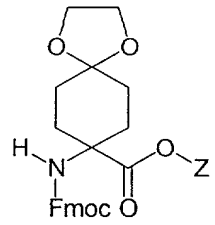
wherein Z comprises the Wang resin.

6. The compound of claim 4 of the formula



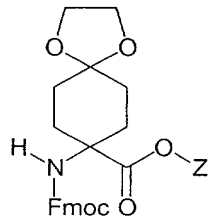
wherein Z comprises the Merrifield resin.

7. The compound of claim 4 of the formula



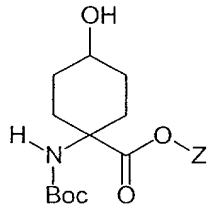
wherein Z comprises the Wang resin.

8. The compound of claim 4 of the formula



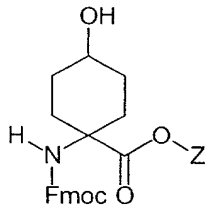
wherein Z comprises the Merrifield resin.

9. The compound of claim 4 of the formula



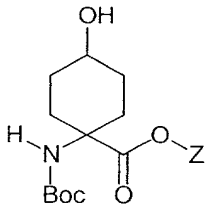
wherein Z comprises the Wang resin.

10. The compound of claim 4 of the formula



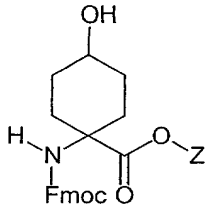
wherein Z comprises the Wang resin.

11. The compound of claim 4 of the formula



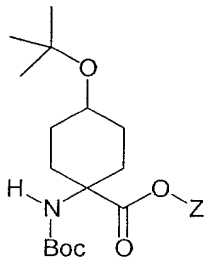
wherein Z comprises the Merrifield resin.

12. The compound of claim 4 of the formula



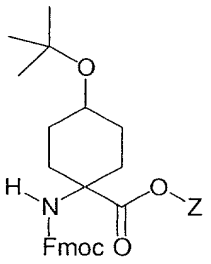
wherein Z comprises the Merrifield resin.

13. The compound of claim 4 of the formula



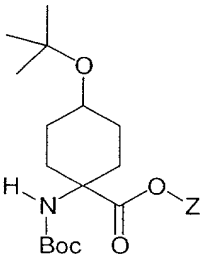
wherein Z comprises the Wang resin.

14. The compound of claim 4 of the formula



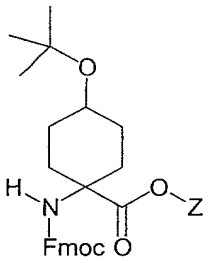
wherein Z comprises the Wang resin.

15. The compound of claim 4 of the formula



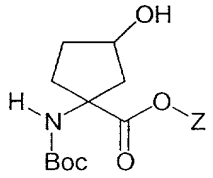
wherein Z comprises the Merrifield resin.

16. The compound of claim 4 of the formula



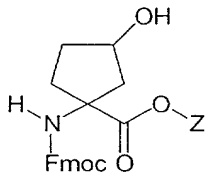
wherein Z comprises the Merrifield resin.

17. The compound of claim 4 of the formula



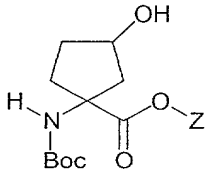
wherein Z comprises the Wang resin.

18. The compound of claim 4 of the formula



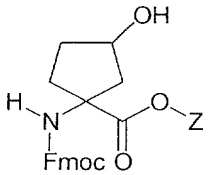
wherein Z comprises the Wang resin.

19. The compound of claim 4 of the formula



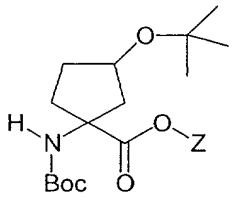
wherein Z comprises the Merrifield resin.

20. The compound of claim 4 of the formula



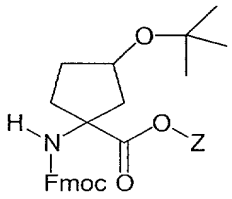
wherein Z comprises the Merrifield resin.

21. The compound of claim 4 of the formula



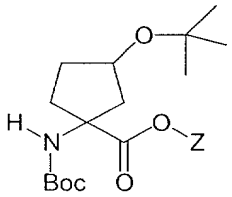
wherein Z comprises the Wang resin.

22. The compound of claim 4 of the formula



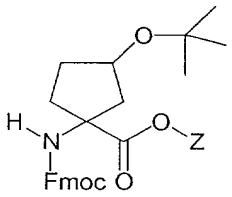
wherein Z comprises the Wang resin.

23. The compound of claim 4 of the formula



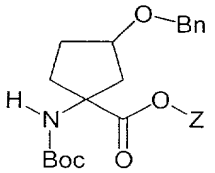
wherein Z comprises the Merrifield resin.

24. The compound of claim 4 of the formula



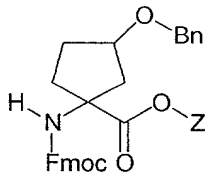
wherein Z comprises the Merrifield resin.

25. The compound of claim 4 of the formula



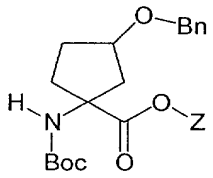
wherein Z comprises the Wang resin.

26. The compound of claim 4 of the formula



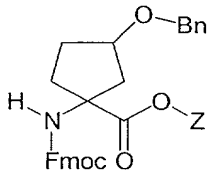
wherein Z comprises the Wang resin.

27. The compound of claim 4 of the formula



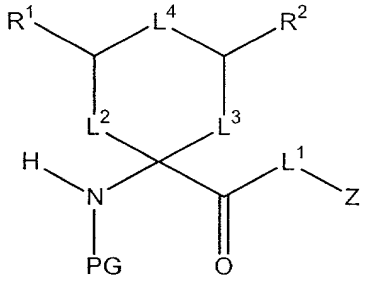
wherein Z comprises the Merrifield resin.

28. The compound of claim 4 of the formula



wherein Z comprises the Merrifield resin.

29. The compound of claim 2, wherein E and K are –CH-, represented by the formula



and wherein,

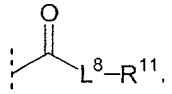
L^2 and L^3 comprise, independently, $-CH_2-$, $-CH_2CH_2-$, or a direct single bond;

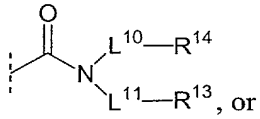
L^4 comprises –O-, -S-, -S(O)-, or $-S(O)_2-$;

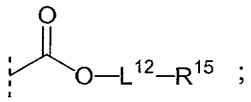
R^1 and R^2 comprise, independently, alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclyl, aryl, heteroaryl, hydrogen, halo, $-O-G^3$, $-O-G^4$, $-G^3$, $-G^4$, or $-N(G^3)G^4$;

R^1 and R^2 may be taken together to constitute a heterocyclyl ring;

G^3 and G^4 comprise, independently,







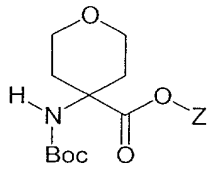
where

L^7, L^8, L^{10}, L^{11}, L^{12} comprise, independently, alkylene, alkenylene, alkynylene, cycloalkylene, cycloalkenylene, arylene, heterocyclylene, heteroarylene, fused cycloalkylarylene, fused cycloakylheteroarylene, fused heterocyclylarylene, fused heterocyclylheteroarylene, or a direct bond; and

R^{10}, R^{11}, R^{13}, R^{14}, R^{15} comprise, independently, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, heterocyclyl, heteroaryl, aryl, fused cycloalkylaryl, fused cycloakylheteroaryl, fused heterocyclylaryl, fused heterocyclylheteroaryl, $-NR^{18}R^{19}$, $-OR^{18}$, $-SR^{18}$, or hydrogen, where R^{18} and R^{19} are as defined below;

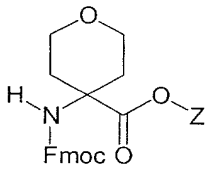
R^{18} and R^{19} comprise, independently, hydrogen, alkyl, alkynyl, alkenyl, cycloalkyl, cycloalkenyl, aryl, heterocyclyl, or heteroaryl.

30. The compound of claim 29 of the formula



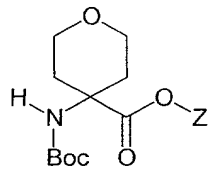
wherein Z comprises the Wang resin.

31. The compound of claim 29 of the formula



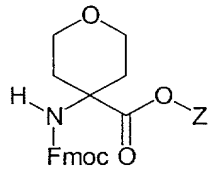
wherein Z comprises the Wang resin.

32. The compound of claim 29 of the formula



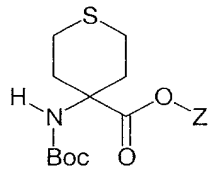
wherein Z comprises the Merrifield resin.

33. The compound of claim 29 of the formula



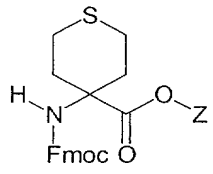
wherein Z comprises the Merrifield resin.

34. The compound of claim 29 of the formula



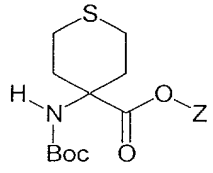
wherein Z comprises the Wang resin.

35. The compound of claim 29 of the formula



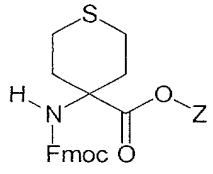
wherein Z comprises the Wang resin.

36. The compound of claim 29 of the formula



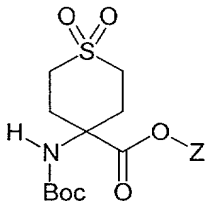
wherein Z comprises the Merrifield resin.

37. The compound of claim 29 of the formula



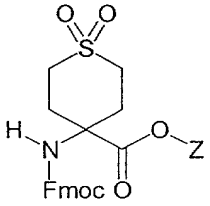
wherein Z comprises the Merrifield resin.

38. The compound of claim 29 of the formula



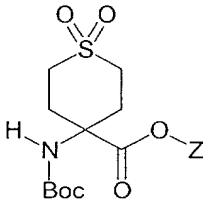
wherein Z comprises the Wang resin.

39. The compound of claim 29 of the formula



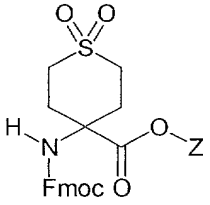
wherein Z comprises the Wang resin.

40. The compound of claim 29 of the formula



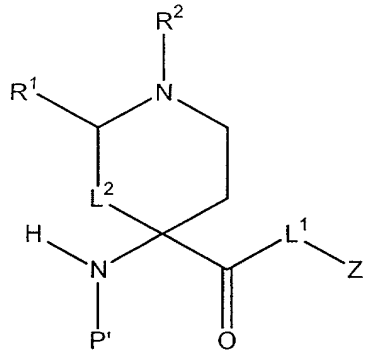
wherein Z comprises the Merrifield resin.

41. The compound of claim 29 of the formula



wherein Z comprises the Merrifield resin.

42. The compound of claim 2, wherein E comprises –CH-, K comprises –N-, L^3 comprises – CH_2CH_2-, L^4 comprises a direct single bond, represented by the formula



and wherein,

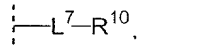
L^2 comprises $-CH_2-$, $-CH_2CH_2-$, or a direct single bond;

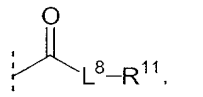
R^1 comprises alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclyl, aryl, heteroaryl, hydrogen, halo, $-O-G^3$, $-G^3$, or $-N(G^3)G^4$;

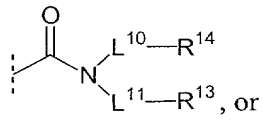
R^2 comprises alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclyl, aryl, heteroaryl, hydrogen, or $-G^5$;

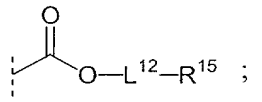
R^1 and R^2 may be taken together to constitute a heterocyclyl ring;

G^3 and G^4 comprise, independently,









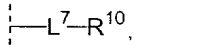
where

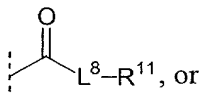
L^7, L^8, L^{10}, L^{11}, L^{12} comprise, independently, alkylene, alkenylene, alkynylene, cycloalkylene, cycloalkenylene, arylene, heterocyclylene, heteroarylene, fused cycloalkylarylene, fused cycloakylheteroarylene, fused heterocyclylarylene, fused heterocyclylheteroarylene, or a direct bond; and

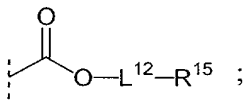
R^{10}, R^{11}, R^{13}, R^{14}, R^{15} comprise, independently, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, heterocyclyl, heteroaryl, aryl, fused cycloalkylaryl, fused cycloakylheteroaryl, fused heterocyclylaryl, fused heterocyclylheteroaryl, $-NR^{18}R^{19}$, $-OR^{18}$, $-SR^{18}$, or hydrogen, where R^{18} and R^{19} are as defined below;

R^{18} and R^{19} comprise, independently, hydrogen, alkyl, alkynyl, alkenyl, cycloalkyl, cycloalkenyl, aryl, heterocyclyl, or heteroaryl;

G^5 comprises







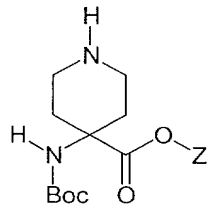
where

L^7, L^8, L^{12} comprise, independently, alkylene, alkenylene, alkynylene, cycloalkylene, cycloalkenylene, arylene, heterocyclylene, heteroarylene, fused cycloalkylarylene, fused cycloakylheteroarylene, fused heterocyclylarylene, fused heterocyclylheteroarylene, or a direct bond; and

R^{10}, R^{11}, R^{15} comprise, independently, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, heterocyclyl, heteroaryl, aryl, fused cycloalkylaryl, fused cycloakylheteroaryl, fused heterocyclylaryl, fused heterocyclylheteroaryl, $-NR^{18}R^{19}$, $-OR^{18}$, $-SR^{18}$, or hydrogen, where R^{18} and R^{19} are as defined below;

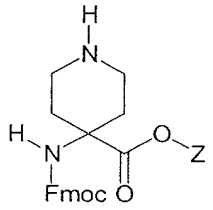
R^{18} and R^{19} comprise, independently, hydrogen, alkyl, alkynyl, alkenyl, cycloalkyl, cycloalkenyl, aryl, heterocyclyl, or heteroaryl.

43. The compound of claim 42 of the formula



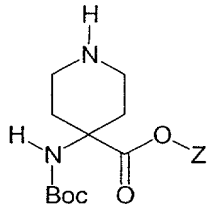
wherein Z comprises the Wang resin.

44. The compound of claim 42 of the formula



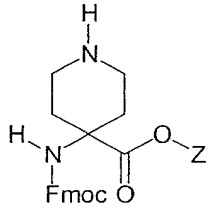
wherein Z comprises the Wang resin.

45. The compound of claim 42 of the formula



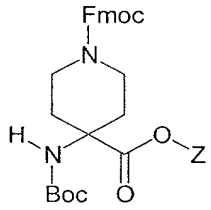
wherein Z comprises the Merrifield resin.

46. The compound of claim 42 of the formula



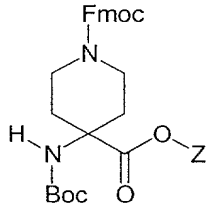
wherein Z comprises the Merrifield resin.

47. The compound of claim 42 of the formula



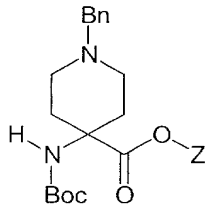
wherein Z comprises the Wang resin.

48. The compound of claim 42 of the formula



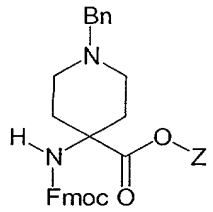
wherein Z comprises the Merrifield resin.

49. The compound of claim 42 of the formula



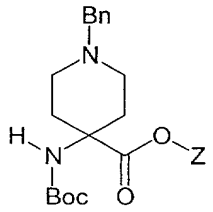
wherein Z comprises the Wang resin.

50. The compound of claim 42 of the formula



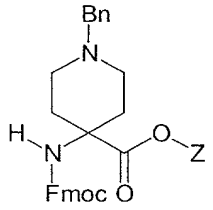
wherein Z comprises the Wang resin.

51. The compound of claim 42 of the formula



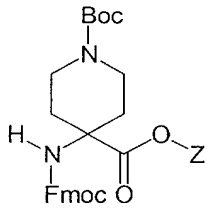
wherein Z comprises the Merrifield resin.

52. The compound of claim 42 of the formula



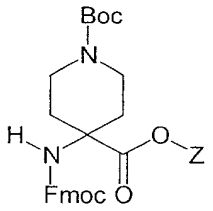
wherein Z comprises the Merrifield resin.

53. The compound of claim 42 of the formula



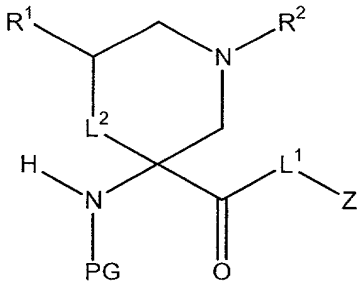
wherein Z comprises the Wang resin.

54. The compound of claim 42 of the formula



wherein Z comprises the Merrifield resin.

55. The compound of claim 2, wherein E comprises –CH-, K comprises –N-, L^3 comprises $-CH_2-$, L^4 comprises $-CH_2-$, represented by the formula



and wherein,

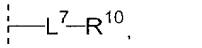
L^2 comprises $-CH_2-$, $-CH_2CH_2-$, or a direct single bond;

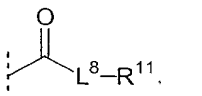
R^1 comprises alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclyl, aryl, heteroaryl, hydrogen, halo, $-O-G_3$, $-G_3$, or $-N(G_3)G_4$;

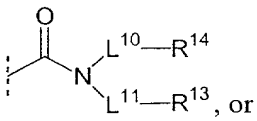
R^2 comprises alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclyl, aryl, heteroaryl, hydrogen, or $-G^5$;

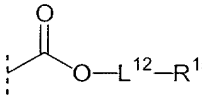
R^1 and R^2 may be taken together to constitute a heterocyclyl ring;

G^3 and G^4 comprise, independently,









;

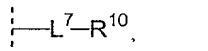
where

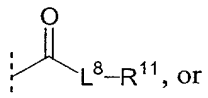
L^7, L^8, L^{10}, L^{11}, L^{12} comprise, independently, alkylene, alkenylene, alkynylene, cycloalkylene, cycloalkenylene, arylene, heterocyclylene, heteroarylene, fused cycloalkylarylene, fused cycloakylheteroarylene, fused heterocyclylarylene, fused heterocyclylheteroarylene, or a direct bond; and

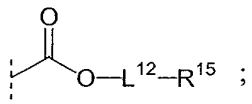
R^{10}, R^{11}, R^{13}, R^{14}, R^{15} comprise, independently, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, heterocyclyl, heteroaryl, aryl, fused cycloalkylaryl, fused cycloakylheteroaryl, fused heterocyclylaryl, fused heterocyclylheteroaryl, $-NR^{18}R^{19}$, $-OR^{18}$, $-SR^{18}$, or hydrogen, where R^{18} and R^{19} are as defined below;

R^{18} and R^{19} comprise, independently, hydrogen, alkyl, alkynyl, alkenyl, cycloalkyl, cycloalkenyl, aryl, heterocyclyl, or heteroaryl.

G^5 comprises







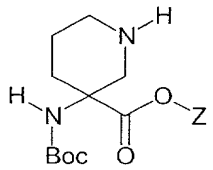
where

L^7, L^8, L^{12} are, independently, alkylene, alkenylene, alkynylene, cycloalkylene, cycloalkenylene, arylene, heterocyclylene, heteroarylene, fused cycloalkylarylene, fused cycloakylheteroarylene, fused heterocyclylarylene, fused heterocyclylheteroarylene, or a direct bond; and

R^{10}, R^{11}, R^{15} are, independently, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, heterocyclyl, heteroaryl, aryl, fused cycloalkylaryl, fused cycloakylheteroaryl, fused heterocyclylaryl, fused heterocyclylheteroaryl, $-NR^{18}R^{19}$, $-OR^{18}$, $-SR^{18}$, or hydrogen, where R^{18} and R^{19} are as defined below;

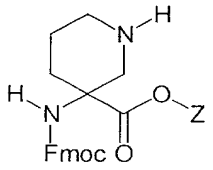
R^{18} and R^{19} are, independently, hydrogen, alkyl, alkynyl, alkenyl, cycloalkyl, cycloalkenyl, aryl, heterocyclyl, or heteroaryl.

56. The compound of claim 55 of the formula



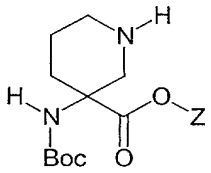
wherein Z comprises the Wang resin.

57. The compound of claim 55 of the formula



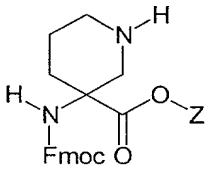
wherein Z comprises the Wang resin.

58. The compound of claim 55 of the formula



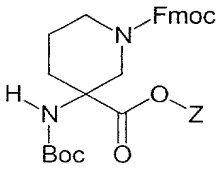
wherein Z comprises the Merrifield resin.

59. The compound of claim 55 of the formula



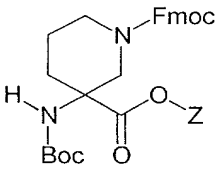
wherein Z comprises the Merrifield resin.

60. The compound of claim 55 of the formula



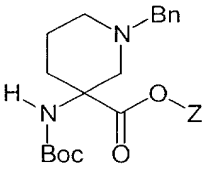
wherein Z comprises the Wang resin.

61. The compound of claim 55 of the formula



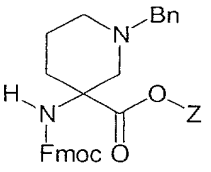
wherein Z comprises the Merrifield resin.

62. The compound of claim 55 of the formula



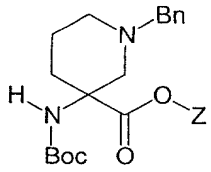
wherein Z comprises the Wang resin.

63. The compound of claim 55 of the formula



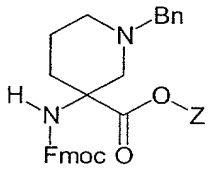
wherein Z comprises the Wang resin.

64. The compound of claim 55 of the formula



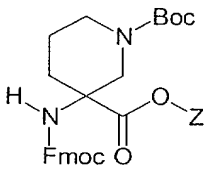
wherein Z comprises the Merrifield resin.

65. The compound of claim 55 of the formula



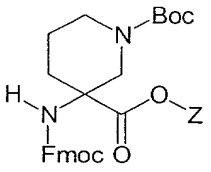
wherein Z comprises the Merrifield resin.

66. The compound of claim 55 of the formula



wherein Z comprises the Wang resin.

67. The compound of claim 55 of the formula



wherein Z comprises the Merrifield resin.